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| TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A SUBMISSION UNDER 35 U.S.C. 371 | | ATTORNEY'S DOCKET NUMBER 59802(49947) |
| INTERNATIONAL APPLICATION NO. PCT/US03/32672 | | INTERNATIONAL FILING DATE 13 October 2003 |
| TITLE OF INVENTION METHODS OF ASSESSING THE RISK OF REPRODUCTIVE FAILURE BY MEASURING TELOMERE LENGTH | | PRIORITY DATE CLAIMED 16 October 2002 |
| APPLICANT(S) FOR DO/EO/US David L. Keefe | | |
| Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information: | | |
| 1. <input checked="" type="checkbox"/> This is a FIRST submission of items concerning a submission under 35 U.S.C. 371. 2. <input type="checkbox"/> This is a SECOND or SUBSEQUENT submission of items concerning a submission under 35 U.S.C. 371. 3. <input checked="" type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371 (f)). The submission must include items (5), (6), (9) and (21) indicated below. 4. <input checked="" type="checkbox"/> The US has been elected (Article 31). 5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371 (c)(2)) a. <input type="checkbox"/> is attached hereto (required only if not communicated by the International Bureau). b. <input type="checkbox"/> has been communicated by the International Bureau. c. <input checked="" type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US). 6. <input type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371 (c)(2)). a. <input type="checkbox"/> is attached hereto. b. <input type="checkbox"/> has been previously submitted under 35 U.S.C. 154(d)(4). 7. <input checked="" type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371 (c)(3)) a. <input type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau). b. <input type="checkbox"/> have been communicated by the International Bureau. c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired. d. <input checked="" type="checkbox"/> have not been made and will not be made. 8. <input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371 (c)(3)). 9. <input type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371 (c)(4)). 10. <input type="checkbox"/> An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371 (c)(5)). | | |
| Items 11 to 20 below concern document(s) or information included: | | |
| 11. <input checked="" type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98. 12. <input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included. 13. <input checked="" type="checkbox"/> A preliminary amendment. 14. <input checked="" type="checkbox"/> An Application Data Sheet under 37 CFR 1.76. 15. <input type="checkbox"/> A substitute specification. 16. <input type="checkbox"/> A power of attorney and/or change of address letter. 17. <input type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 CFR 1.821 - 1.825. 18. <input type="checkbox"/> A second copy of the published International Application under 35 U.S.C. 154(d)(4). 19. <input type="checkbox"/> A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4). 20. <input checked="" type="checkbox"/> Other items or information: Return Receipt Postcard, Unexecuted Declaration, Petition and Power of Attorney; Petition to Revive Unintentionally Abandoned Patent Application. | | |

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| U.S. APPLICATION NO. (if no. 37 CFR 1.53) | | INTERNATIONAL APPLICATION NO. | | ATTORNEY'S DOCKET NUMBER | |
| 10/531964 | | PCT/US03/32672 | | 59802(49947) | |
| The following fees have been submitted | | | | CALCULATIONS | PTO USE ONLY |
| 21. | <input checked="" type="checkbox"/> Basic national fee | \$300 | | \$ 300.00 | |
| 22. | <input checked="" type="checkbox"/> Examination fee | | | | |
| If International preliminary examination report prepared by USPTO and all claims satisfy provisions of PCT Article 33(1)-(4)..... | | | | \$100 | |
| All other situations | | | | \$200 | \$ 200.00 |
| 23. | <input checked="" type="checkbox"/> Search fee | | | | |
| Search fee (37 CFR 1.445(a)(2)) has been paid on the international application to the USPTO as an International Searching Authority..... | | | | \$100 | |
| International Search Report prepared and provided to the Office | | | | \$400 | |
| All other situations | | | | \$500 | \$ 100.00 |
| TOTAL OF 21, 22 and 23 = | | | | \$ 1,000.00 | |
| <input type="checkbox"/> Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing or computer program listing filed in an electronic medium). The fee is \$250 for each additional 50 sheets of paper or fraction thereof. | | | | | |
| Total Sheets | Extra sheets | Number of each additional 50 or fraction thereof (round up to a whole number) | RATE | | |
| 47 - 100 = | /50 = | | x \$250.00 | | |
| Surcharge of \$130.00 for furnishing the oath or declaration later than 30 months from the earliest claimed priority date (37 CFR 1.492 (e)). | | | | \$ 130.00 | |
| CLAIMS | NUMBER FILED | NUMBER EXTRA | RATE | | |
| Total claims | 50 - 20 = | 30 | x 50.00 | \$ 1,500.00 | |
| Independent claims | 9 - 3 = | 6 | x 200.00 | \$ 1,200.00 | |
| MULTIPLE DEPENDENT CLAIM(s) (if applicable) | | | + 0.00 | \$ 0.00 | |
| TOTAL OF ABOVE CALCULATIONS = | | | | \$ 4,430.00 | |
| <input checked="" type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. Fees above are reduced by 1/2. | | | | \$ 2,215.00 | |
| SUBTOTAL = | | | | \$ 2,215.00 | |
| Processing fee of \$130.00 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492 (f)). | | | | + | \$ |
| TOTAL NATIONAL FEE = | | | | \$ 2,215.00 | |
| Fee for recording the enclosed assignment (37 CFR 1.21 (h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property | | | | + | \$ |
| TOTAL FEES ENCLOSED = | | | | \$ 2,215.00 | |
| | | | | Amount to be refunded: | \$ |
| | | | | Amount to be charged: | \$ |
| <p>a. <input type="checkbox"/> A check in the amount of \$ _____ to cover the above fees is enclosed.</p> <p>b. <input checked="" type="checkbox"/> Please charge my Deposit Account No. <u>04-1105</u> in the amount of \$ <u>2,215.00</u> to cover the above fees. A duplicate copy of this sheet is enclosed.</p> <p>c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. <u>04-1105</u>. A duplicate copy of this sheet is enclosed.</p> <p>d. <input type="checkbox"/> Fees are to be charged to a credit card. WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.</p> <p>NOTE: Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137 (a) or (b)) must be filed and granted to restore the International Application to pending status.</p> <p>SEND ALL CORRESPONDENCE TO:</p> <p>Peter C. Lauro EDWARDS & ANGELL, LLP P.O. Box 55874 Boston, Massachusetts 02205 (617) 439-4444 CUSTOMER NUMBER: 21874</p> <p>SIGNATURE: <u>Peter C. Lauro</u> NAME: <u>Peter C. Lauro</u> REGISTRATION NUMBER: <u>32,360</u></p> | | | | | |

PTO/SB/17 (12-04v2)
Approved for use through 7/31/2008, OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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| Effective on 12/08/2004. Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818). FEE TRANSMITTAL For FY 2005 | | Complete if Known | |
| <input checked="" type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27 | | Application Number | Not Yet Assigned |
| | | Filing Date | April 19, 2005 |
| | | First Named Inventor | David L. Keefe |
| | | Examiner Name | Not Yet Assigned |
| | | Art Unit | N/A |
| TOTAL AMOUNT OF PAYMENT (\$) 2,215.00 | | Attorney Docket No. | 59802(49947) |

METHOD OF PAYMENT (check all that apply)

☐ Check
 ☐ Credit Card
 ☐ Money Order
 ☐ None
 ☐ Other (please identify): _____

☒ Deposit Account
 Deposit Account Number: 04-1105
 Deposit Account Name: Edwards & Angell, LLP

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☒ Charge fee(s) indicated below
 ☐ Charge fee(s) indicated below, except for the filing fee
☐ Charge any additional fee(s) or underpayment of fee(s) under 37 CFR 1.16 and 1.17
 ☒ Credit any overpayments

FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

| Application Type | FILING FEES | | SEARCH FEES | | EXAMINATION FEES | | Fees Paid (\$) |
|------------------|-------------|-----------------------|-------------|-----------------------|------------------|-----------------------|----------------|
| | Fee (\$) | Small Entity Fee (\$) | Fee (\$) | Small Entity Fee (\$) | Fee (\$) | Small Entity Fee (\$) | |
| Utility | 300 | 150 | 500 | 250 | 200 | 100 | |
| Design | 200 | 100 | 100 | 50 | 130 | 65 | |
| Plant | 200 | 100 | 300 | 150 | 160 | 80 | |
| Reissue | 300 | 150 | 500 | 250 | 600 | 300 | |
| Provisional | 200 | 100 | 0 | 0 | 0 | 0 | |

2. EXCESS CLAIM FEES

| Fee Description | Fee (\$) | Small Entity Fee (\$) |
|--|----------|-----------------------|
| Each claim over 20 (including Reissues) | 50 | 25 |
| Each independent claim over 3 (including Reissues) | 200 | 100 |
| Multiple dependent claims | 360 | 180 |

Total Claims Extra Claims Fee (\$) Fee Paid (\$) Multiple Dependent Claims
 50 - 20 = 30 x 50.00 = 1500 Fee (\$) Fee Paid (\$)

Indep. Claims Extra Claims Fee (\$) Fee Paid (\$)
 9 - 3 = 6 x 200.00 = 1200.00

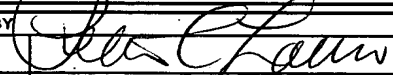
3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

| Total Sheets | Extra Sheets | Number of each additional 50 or fraction thereof | Fee (\$) | Fee Paid (\$) |
|--------------|--------------|--|--------------------------------|---------------|
| 47 | - 100 = | /50 | (round up to a whole number) x | = |

4. OTHER FEE(S)

| | Fee (\$) | Fees Paid (\$) |
|---|----------|----------------|
| Non-English Specification, \$130 fee (no small entity discount) | | |
| Other (e.g., late filing surcharge): | | |
| 2631 Basic National Stage fee | 150.00 | |
| 2633 National Stage Examination Fee - all other ... | 100.00 | |
| 2632 National Stage Search Fee - all other situations | 250.00 | |
| 2617 National Stage oath or declaration after thirty ... | 65.00 | |
| 2615 National Stage claims - extra total (over twenty) | 525.00 | |
| 2614 National Stage claims - extra independent (over ...) | 600.00 | |
| 2453 Petition to Revive Unintentionally Abandoned Application | 750.00 | |

| | | | |
|---------------------|---|-----------------------------------|----------------|
| SUBMITTED BY | | | |
| Signature |  | Registration No. (Attorney/Agent) | 32,360 |
| Name (Print/Type) | Peter C. Lauro | Telephone | (617) 439-4444 |
| | | Date | April 19, 2005 |

Application No. (if known): Not Yet Assigned

Attorney Docket No.: 59802(49947)

Certificate of Express Mailing Under 37 CFR 1.10

I hereby certify that this correspondence is being deposited with the United States Postal Service as Express Mail; Airbill No. EV438976710US in an envelope addressed to:

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Alexandria, VA 22313-1450

on April 19, 2005
Date



Signature

George N. Chaclos

Typed or printed name of person signing Certificate

46,608
Registration Number, if applicable

(617) 439-4444
Telephone Number

Note: Each paper must have its own certificate of mailing, or this certificate must identify each submitted paper.

Fee Transmittal (1 page)
Application Data Sheet (2 pages)
Transmittal Letter to the United States Designated-Elected Office (2 pages)
Information Disclosure Statement
Form PTO/SB08a/b
Unexecuted Declaration/Power of Attorney
Petition to Revive Unintentionally Abandoned Patent Application
Return Receipt Postcard

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